Cisco 2600-DC Series Modular Access Platform

Cisco Systems Extends Versatility, Integration, and Power of the Cisco 2600 Series Modular Access Platform series to Service Provider central offices and Data Communications Networks.

As part of a scalable Data Communications Network (DCN) solution, including the Cisco Catalyst® 1924-DC switch, Catalyst 2924M-XL switch, Catalyst 4003-DC switch, Cisco 3662-AC/DC-CO, Cisco 3640, Cisco 3631-CO, and Cisco 2600 Series modular access platforms, the Cisco 2600 Series supports central office (CO) serial, X.25 and Internet protocol/open system interconnection (IP/OSI) interfaces for operations management in Service Provider, Inter-Exchange Carrier (IXC), and Post, Telephone and Telegraph (PTT) networks. The Cisco DCN solution supports synchronous optical network/synchronous digital hierarchy (SONET/SDH) network element (NE) connectivity for alarm monitoring and control, remote provisioning, and software download. Other operations systems network applications include local number portability and billing data collection. In addition, competitive local exchange carriers (CLECs) can use the Cisco 2600 in small point of presences (POPs) or central office colocations for digital subscriber line access multiplexers (DSLAMs), voice switches, and transmission operations networking.

The modular architecture of the Cisco 2600 Series allows interfaces to be upgraded to accommodate network expansion or changes in technology as new services and applications are deployed. Service providers can integrate the functions of multiple, separate devices into a single, compact unit, thereby reducing the complexity of managing DCN infrastructures. For example, the Cisco 2600 Series supports connectivity to legacy asynchronous and X.25 devices as well as standards-based IP devices, facilitating a graceful migration from legacy to next generation network elements. Driven by a powerful RISC processor, the Cisco 2600 Series provides the extra power needed to support the advanced quality of service (QoS), higher bandwidth and security features required for connecting to today's Network Operation Center (NOC) systems.

The Cisco 2600 Series meets service provider's critical physical requirements for equipment depth fitting right alongside transmission equipment on standard 12 inch deep racks, and occupying only 1RU in height. Offered in six base configurations supporting fixed single or dual local-area network (LAN) ports, each Cisco 2600 also includes one network module slot, two wide-area network (WAN) interface card slots

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and one advanced integration module (AIM) slot. Rear access cabling allows easy connectivity; the modular design shares a large number of modules with the Cisco 3600 Series and permits fast servicing of Field Replaceable Units (FRUs). DC, AC and redundant AC power supply adapter modules are also field replaceable. Network Equipment Building Standards (NEBS) Level 3/ ETSI compliance is achieved when used with the Cisco 2600's optional NEBs/ETSI kit (note the NEBS kit is included with the Cisco 2650-DC and Cisco 2651-DC model). Common Language Equipment Identification (CLEI) coding is provided for easy identification and tracking of central-office equipment. Robust network management capability for the Cisco DCN solution is achieved by using the CiscoWorks, Cisco View and Cisco View Stack Management Interface applications.

Figure 1 Cisco 2600 Series Modular Access Routers

Key Benefits

The Cisco 2600 Series lowers network lifecycle costs with the following benefits:

- *Investment protection*—Because the Cisco 2600 Series supports field-upgradable modular components, network interfaces can easily be changed without a "forklift upgrade." Modular interfaces are shared with the Cisco 1600, 1700, and 3600 Series permitting scalable re-deployment of modules throughout the network. The AIM slot of the Cisco 2600 platform further protects investments by offering the expandability to support advanced services such as hardware-assisted data compression, hardware-assisted data encryption, or ATM data/ voice access.
- N*etwork Consolidation*—By integrating the functions of channel service unit/data service units (CSU/DSUs), integrated services digital network (ISDN) Network Termination (NT1) devices, firewalls, modems, compression or encryption devices, voice/data gateways and other equipment found in service provider COs and DCNs into a single, compact unit, the Cisco 2600 Series provides a space-saving solution.
- *Simplifies network management and training*—By using CiscoWorks and Cisco View, the Cisco 2600 and Catalyst 1924DC switch can be managed remotely as a single entity, eliminating the need to telnet or establish connections to multiple network peripherals using different management tools. These same tools also manage the higher performance Catalyst 2924M XL and the Cisco 3662-AC/DC-CO.
- *Multiservice voice/data integration*—The Cisco 2600 Series reinforces the commitment by Cisco to integrate multiservice voice/data integration capabilities to its product portfolio, enabling the consolidation of parallel networks with bandwidth-efficient packet telephony. Using the Voice/Fax modules, the Cisco 2600 may be deployed in both Voice over IP (VoIP) and Voice over Frame Relay (VoFR) networks. The packet voice trunk network module supports up to 60 simultaneous voice calls in a Cisco 2600 as well as supporting routing and other services. When used with the ATM-AIM, VoATM using AAL2 or AAL5 can be deployed.

Cisco 2600 Series Chassis Options

Every Cisco 2600 has two WAN Interface Card (WIC) slots, one Network Module slot, and an AIM slot along with one or two fixed LAN ports, one asynchronous auxiliary port and one console port.

The Cisco 2600 Series is available in three performance levels and six base configurations:

- Cisco 2650 and Cisco 2651—up to 37K packets per second (pps), one and two autosensing 10/100 Mbps Ethernet ports
- Cisco 2620 and Cisco 2621—up to 25K pps, one and two autosensing 10/100 Mbps Ethernet ports

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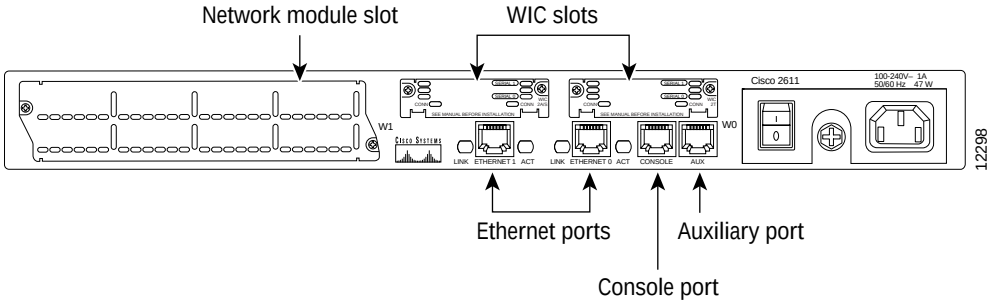
- Cisco 2610 through Cisco 2613—up to 15K pps
  - Cisco 2613—One Token Ring port
  - Cisco 2612—One Ethernet port, one Token Ring port
  - Cisco 2611—Two Ethernet ports
  - Cisco 2610—One Ethernet port

AC power supply versions are also available.

The WAN interface cards available for the Cisco 1600, 1720, 2600, and 3600 platforms support a variety of serial, Integrated Services Digital Network Basic Rate Interface (ISDN BRI), and integrated CSU/DSU options for primary and backup WAN connectivity. Network modules available for the Cisco 2600 and 3600 Series support a broad range of applications, including multiservice voice/data integration, analog and ISDN dial access, and serial device concentration. The internal Data Compression AIM for the Cisco 2600 Series off-loads the task of performing high-speed data compression from the Cisco 2600's main CPU, allowing compressed data throughput of up to 8-Mbps while preserving external interface slots for other applications.

Figure 2 Cisco 2600 Series Back Panel View (Cisco 2611 Shown)



Features and Benefits

The Cisco 2600 Series brings a cost-effective combination of versatility, integration, and power to service providers with the features listed in Table 1.

Table 1 Features and Benefits of the Cisco 2600 Series

Features	Benefits
Versatility and Investment Protection	
Modular Architecture	• Network interfaces are field-upgradable to accommodate future technologies while providing a solution to meet today's needs • Additional interfaces can be added on a "pay-as-you-grow" basis to accommodate network growth • Wide variety of interfaces and port densities for IP, ATM, Frame and TDM networks to support any Central Office environment
Broad array of WAN Interface Cards and Network Modules Shared with Cisco 1600, 1700, and 3600 Series Modular Access Platforms	• Reduces cost of maintaining inventory of Cisco 1600, 1700, 2600, and 3600 Series modular components • Lower training costs for support personnel
Advanced Integration Module Slot	• Expandability for integration of advanced high performance services such as hardware-assisted data compression, encryption, and ATM access. • Maximizes performance by off-loading processor intensive applications to a coprocessor.

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Table 1 Features and Benefits of the Cisco 2600 Series (Continued)

Features	Benefits
Choice of LAN Configurations	• Meets specific Telco DCN and CO Local Area Network requirements including single and dual LAN connections for auto-sensing 10/100Mbps Ethernet, Token Ring, mixed Ethernet and Token Ring environments
DC and AC Power Supply Options	• Allows deployment in DC power environments such as telecommunications carrier central offices or as a managed Customer Premise Equipment (CPE) platform with an AC power supply
Service Provider/Carrier DCN-Class Performance	
High-Performance Architecture	• RISC processor based to support high-speed routing performance of up to 37,000 packets per second for maximum scalability to support more concurrent functions (Cisco 2650 and Cisco 2651) per second for maximum scalability • Support for advanced QoS features such as the Resource Reservation Protocol (RSVP), Weighted Fair Queuing (WFQ), and IP Precedence to reduce recurring WAN costs • Support for up to 8 T1/E1 network connections • Up to 36 asynchronous or 12 synchronous connections are supported in a single Cisco 2600 enabling telemetry applications • Support for TDM traffic with drop and insert capability • AIM slot support to off-load processor intensive applications including hardware-based compression, encryption, and ATM access. • Enables security features such as data encryption, tunneling, and user authentication and authorization for virtual private network (VPN) access • Full Cisco IOS® Software Support
Deployed in IP networks around the world, the Cisco IOS software supports the following DCN related services:	• Full IP Routing Services including multiprotocol BGP, multi-Area ISIS and DNS • TL1 support including transport via X.25, TCP or OSI. TID Address Resolution Protocol (TARP) support and TARP Storm Avoidance support. • PPP services including WAN interface support for ISDN, Frame Relay, ATM, and X.25 • X.25 support services including X.25 switching, X.3 Asynchronous PAD, DNS for X.25 address resolution, Hunt Groups, and SVC/PVC conversion • IP to X.25 Protocol Translation • BX.25 Transport over X.25 or TCP (XOT) • Support for up to 3 OSI/IS-IS areas, per chassis, essentially providing the same capabilities as 3 separate OSI routers. • Full-featured IP and OSI routing and mediation on a single platform, including legacy X.25, and async devices support ICSA-certified Cisco IOS Firewall feature sets provide support for advanced security features such as Context-Based Access Control (CBAC), Java blocking, denial of service protection, and audit trails • Integration of legacy networks via data link switching plus (DLSW+) and Advanced Peer-to-Peer Networking (APPN)
Simplified Management	
Common Language Equipment Identification (CLEI) Codes	• Enables easy identification and tracking of central-office equipment
Part of the Cisco DCN Stackable Solutions	• Can be stacked with LAN switches such as the Catalyst 1924DC or Cisco 3662-AC/DC-CO modular access platform
VLAN Support	• Enables inter-VLAN routing via the Cisco Inter-Switch Link (ISL) protocol with the Cisco Catalyst 1924DC and 2924M XL DC switches and the Cisco 3662-AC/DC-CO when used with the Cisco 2620 and 2621 and Cisco IOS “Plus” feature set

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Table 1 Features and Benefits of the Cisco 2600 Series (Continued)

Features	Benefits
Cisco Discovery Protocol (CDP) Support	• Enables a CiscoWorks network management station to automatically discover the Cisco 2600 in a network topology.
Integrated CSU/DSU, Analog Modem and NT1 Options	• Enables remote management of all CPE elements for higher network availability and lower operational costs
Support for Cisco Works and CiscoView	• Allows simplified management of all integrated and stackable components
Support for Cisco Voice Manager (CVM)	• Reduces the cost of deploying and managing integrated voice/data solutions
Enhanced Setup Feature	• Context-sensitive questions guide the user through the router configuration process, allowing faster deployment
Support for Cisco AutoInstall	• Configures remote routers automatically across a WAN connection to save cost of sending technical staff to the remote site
Cisco Configuration Express Support	• Enables quick and cost-effective deployment of large installations by ordering custom-configured platforms from Cisco
Reliability	
Dial-on-Demand Routing	• Allows automatic backup of WAN connection in case of a primary link failure
Dual Bank Flash Memory	• Backup copy of the Cisco IOS software can be stored in Flash memory
Redundant AC Power Supply Option	• AC RPS option can be shared with other network components such as the Cisco Catalyst 1924 Series to protect CPE network from downtime due to power failures
Ergonomic Design	
LED Status Indicators	• Provide at-a-glance indications for power, RPS status, network activity, and interface status
All Network Interfaces Located on Back of Unit	• Simplifies installation and cable management for maximum uptime
Easy-to-Open Chassis Design	• Allows fast and easy access for installation of memory or AIM
Multispeed Fan	• Enables quiet operation in CPE environments

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Cisco IOS Software

Modeled after the Cisco 2500 and 3600, the Cisco 2600 Series supports a full range of Cisco Internetworking Operating System, (IOS) features. These feature sets include a wide variety of intranet, multiprotocol, QoS, and legacy IBM applications in use today. The Cisco 2600 Series offers several base protocol feature sets and a combination of premium feature options including the Plus, encryption and firewall feature sets.

The available IOS feature sets are:

- IP
- IP/IPX/AppleTalk/DEC
- Remote Access Services
- Enterprise
- Enterprise APPN
- Telco

The Base feature sets support popular protocols and standards such as network address translation (NAT), open shortest path first (OSPF), Border Gateway Protocol (BGP), Remote Access Dial-In User Service (RADIUS), IP Multicast, remote monitoring (RMON), and WAN optimization features (such as Bandwidth on Demand; Custom, Priority and WFQ, Dial Back-up and RSVP).

Some base feature sets are offered in combination with premium capabilities found in the Plus, Firewall and Encryption feature sets. The Plus feature sets contain additional value-added features such as, L2TP, L2F, Voice/Data integration, legacy mainframe protocols, DLSw, Asynchronous Transfer Mode (ATM), virtual LANs (VLANs), Netflow, etc. Additional premium security oriented features include IPSec, and 3DES encryption as well as ICSA certified Firewall capabilities.

The Cisco IOS® Telco feature set is a specialized image for service providers. This optimized Cisco IOS image supports IP, X.25/PAD, X.25/IP protocol translations, and all OSI routing and protocol translation features. This image offers the service provider the critical network-management features required to manage a diverse network topology. The Cisco IOS Telco image enhances memory utilization by stripping away underutilized features such as Appletalk and Banion Vines. This Cisco IOS image is specific to the Cisco DCN environment, and is not available with Cisco IOS 12.2.2T.

The Enterprise Plus feature set is the Cisco comprehensive offering of protocols, standards, and value-add networking capabilities. This feature set includes a broad array of QoS, LAN and WAN protocols including legacy mainframe protocols, protocol translation, remote node and terminal services. Additionally, the Enterprise Plus feature set includes a number of telco-oriented features, such as OSI and X.25 Pad, IP/X.25 protocol translation, request for comment (RFC) 1613-XOT, TL1 transport and TARP Storm Avoidance.

The Remote Access Services feature set includes various management, multicast, security (excluding encryption), protocol translation, remote node and terminal services and some LAN and WAN service and optimization protocols but excludes some of the capabilities found in the Enterprise Plus feature set.

A more detailed list of features can be found in the Cisco 2600 IOS release notes. The memory requirements for a given feature set can be found in the Cisco 2600 software features and memory requirements product bulletin. Note: Cisco 2600 Series modular access routers ship with 32MB of DRAM memory and 8MB of Flash memory as the default configuration. Some Cisco IOS feature sets require additional memory.

Technical Specifications

- Main Processor: 80 MHz RISC (Cisco 265x); 50 MHz RISC (Cisco 262x); 40 MHz RISC (Cisco 261x)
- Flash Memory: 8 to 16MB (Cisco 261x); 8 to 32MB (Cisco 262x[1] and Cisco 265x only)
- System Memory (DRAM): 32 to 64MB (Cisco 261x and Cisco 262x); 32 to 128MB (Cisco 265x only, uses SDRAM)
- WAN Interface Card Slots: 2
- Network Module Slot: 1
- AIM Slot: 1
- Console/Aux Speed: 115.2-Kbps (maximum)
- Width: 17.5 in. (445 mm)
- Height: 1.69 in. (43 mm)
- Depth: 11.8 in. (300 mm)

1. Support for 32MB Flash requires Cisco IOS 12.1(3)T or later.

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- Weight (min): 8.85 lb (4.02 kg)
- Weight (max): 10.25 lb (4.66 kg)
- Power Dissipation: 72W (maximum)
- AC Input Voltage: 100 to 240 VAC
- Frequency: 47 to 64 Hz
- AC Input Current: 1.5 amps
- DC Input Voltage: -38V to -60V (UL label)
- DC Input Current: 2 amps
- Operating Temperature: 32 to 104 F (0 to 40 C)
- Non-operating Temperature: -13 to 158 F (-25 to 70 C)
- Relative Humidity: 5 to 95% non-condensing
- Noise Level (min): 38-dbA
- Noise Level (max): 42-dbA

NEBS Compliance

The optional NEBS Level 3/ETSI kit ensures a Cisco 2600 modular access platform meets NEBS Level 3/ETSI standards for networking equipment usually found in the central office. This kit is available for the Cisco 261x and Cisco 262x Series as a spare (ACS-2600NEBS/ETSI=). This kit also includes the 23/24 inch rack mount kit for Hendry Bays. This kit is included with the Cisco 265x-DC Series.

Regulatory Compliance

The Cisco 2600-DC module access platform conforms to a number of safety, EMI, immunity and network homologation standards. Details of the regulatory specifications are included at http://www.cisco.com/kobayashi/Support_root.shtml.

Year 2000 Compliance

For detailed Year 2000 compliance information on the Cisco 2600 Series, reference Cisco's Year 2000 Compliance Web site at http://www.cisco.com/warp/customer/752/2000/.

WAN Interface Card Options

The Cisco 2600 Series supports all WAN Interface Cards available for the Cisco 1600, 1700 and 3600 Series, as well as two new dual-port serial WAN interface cards to maximize interface density and slot efficiency. The new dual-serial port WAN interface cards feature Cisco's new, compact, high-density Smart Serial connector to support a wide variety of electrical interfaces when used with the appropriate transition cable.

Figure 3 Dual-Port High-Speed Serial WIC (up to 2 Mbps/Port)

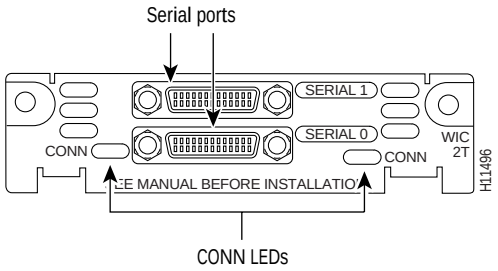

Figure 4 Dual-Port Async/Sync Serial WIC (up to 128 Kbps/Port)

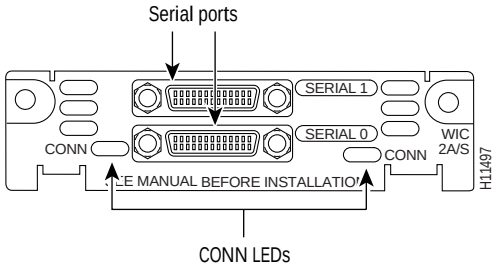

Table 2 WAN Interface Cards and Voice Interface Cards for Cisco 2600 Series

Part Number	Description
WIC-1DSU-T1	T1/Fractional T1 CSU/DSU (requires IOS software version 11.3(4)T or later)
WIC-1DSU-56K4	One-port four-wire 56/64-kbps CSU/DSU
WIC-1T	One-port high-speed serial
WIC-2T	Dual high-speed serial
WIC-2A/S	Two-port async/sync serial
WIC-1B-S/T	One-port ISDN BRI
WIC-1B-U	One-port ISDN BRI with NT

Network Module Options

The Cisco 2600 Series supports the Network Modules listed in Table 3; these modules are shared with the Cisco 3600 Series.

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Table 3 Network Modules for Cisco 2600 Series

Module	Description
ATM WAN Network Modules for Cisco 2600 Series (Requires IOS Software Release 12.0(5) or Later)	
NM-4T1-ATM[1]	Four-port T1 ATM with Inverse Multiplexing over ATM (IMA) network module
NM-8T1-ATM[1]	Eight-port T1 ATM with IMA network module
NM-4E1-ATM[1]	Four-port E1 ATM with IMA network module
NM-8E1-ATM[1]	Eight-port E1 ATM with IMA network module
NM-1A-T3[1]	One-port DS-3 (44Mbps) ATM network module (requires Cisco IOS version 12.1(2)T or later)
NM-1A-E3[1]	One-port E-3 ATM network module (requires Cisco IOS version 12.1(2)T or later)
NM-1A-OC3SML-1V[1,4] NM-1A-OC3SMI-1V[1,4] NM-1A-OC3MM-1V[1,4]	One-port single mode long (SML) reach OC-3 ATM with Circuit Emulation Services (AAL-1) network module, single mode intermediate (SMI) reach, and mulitmode (MM) (requires Cisco IOS version 12.1(2)T or later). OC3 MODULES ARE ONLY SUPPORTED ON THE CISCO 2650 AND CISCO 2651.
Serial Network Modules for Cisco 2600 Series (Requires IOS Software Release 11.3(2) or Later)	
NM-16A	16-port high density async network module
NM-32A	32-port high density async network module
NM-4A/S	Four-port low speed (128 Kbps max) async/sync serial network module
NM-8A/S	Eight-port low speed (128 Kbps max) async/sync serial network module
NM-2W	Two-WAN interface card slot network module (WAN interface cards offered separately)
LAN Network Modules for Cisco 2600 Series (Requires IOS Software Release 11.3(4)T or Later)	
NM-1E	One-port Ethernet network module
NM-4E	Four-port Ethernet network module
NM-1ATM-25[1]	One-port ATM 25Mbps network module
Dial, ISDN and Channelized Serial Network Modules for Cisco 2600 Series (Requires IOS Software Release 11.3(4)T or Later)	
NM-1CT1	One-port channelized T1/ISDN PRI network module
NM-1CT1-CSU	One-port channelized T1/ISDN PRI with CSU/DSU network module
NM-2CT1	Two-port channelized T1/ISDN PRI network module
NM-2CT1-CSU	Two-port channelized T1/ISDN PRI with CSU/DSU network module
NM-1CE1B	One-port channelized E1/ISDN PRI balanced network module
NM-1CE1U	One-port channelized E1/ISDN PRI unbalanced network module
NM-2CE1B	Two-port channelized E1/ISDN PRI balanced network module
NM-2CE1U	Two-port channelized E1/ISDN PRI unbalanced network module

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Table 3 Network Modules for Cisco 2600 Series (Continued)

Module	Description
NM-4B-S/T	Four-port ISDN BRI network module (S/T interface)
NM-4B-U	Four-port ISDN BRI with NT-1 network module (U interface)
NM-8B-S/T	Eight-port ISDN BRI network module (S/T interface)
NM-8B-U	Eight-port ISDN BRI with NT-1 network module (U interface)
Modem Modules and License (Requires IOS Software Release 11.3(4)T or later)	
NM-8AM	Eight analog modem network module
NM-16AM	Sixteen analog modem network module
MMTL-3600/2600-8	Modem Management Technology License, eight modems
MMTL-3600/2600-16	Modem Management Technology License, 16 modems
Voice/Fax Network Modules for Cisco 2600 Series (Requires IOS Release 11.3(2) or Later)	
NM-1V1	One-slot voice/fax network module (up to 2 voice channels)
NM-2V1	Two-slot voice/fax network module (up to 4 voice channels)
NM-HDV-1T1-24=[1,2]	Twenty-four-channel T1 high density voice/fax network module
NM-HDV-1E1-30=[1,3]	Thirty-channel E1 high density voice/fax network module
NM-HDV-1T1-24E=[1,2]	Twenty-four-channel T1 enhanced high density voice/fax network module
NM-HDV-1E1-30E=[1,3]	Thirty-channel enhanced E1 high density voice/fax network module
NM-HDV-2T1-48[1,2]	Forty-eight-channel T1 high density voice/fax network module
NM-HDV-2E1-60[1,3]	Sixty-channel E1 high density voice/fax network module
NM-HDV=[1,2]	High-density voice module, spare (no T1 or DSPs)

1. All ATM and Packet Voice network modules require a Cisco IOS Plus feature set.
2. Requires Cisco IOS Version 12.05XK or later.
3. Requires Cisco IOS Version 12.07XK or later.

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Table 4 Voice Interface Cards for Use with the Voice/Fax Network Modules

Module	Description
VIC-2FXS	Two-port FXS voice/fax interface card for voice/fax network module
VIC-2FXO-M1[1]	Two-port FXO voice/fax interface card for voice/fax network module with Caller ID and supervisory disconnect (North American version and other countries)
VIC-2FXO	Two-port FXO voice/fax interface card for voice/fax network module
VIC-2FXO-EU	Two-port FXO voice/fax interface card for Europe
VIC-2FXO-M3	Two-port FXO voice/fax interface card for Australia
VIC-2E/M	Two-port E&M voice/fax interface card for voice/fax network module
VIC-2BRI-NT/TE-TE[2]	Two-port BRI NT/TE VIC interface providing configurable phantom –48VDC power, delivering 4 bearer channels of voice
VIC-2BRI-S/T-TE[3]	Two-port BRI S/T terminal equipment voice/fax interface card for voice/fax network module

1. Supported with Cisco IOS 12.1(2)XH or later.
2. Supported starting with Cisco IOS Plus 12.1(3)XI.
3. Supported on the Cisco 261x with Cisco IOS 12.0(2)XD and Cisco 262x on 12.0(3)T or later.

Table 5 Cisco 2600 Series Supported Multiflex Voice/WAN Interface Cards for Use with Voice/Fax Network Module and as a Standalone WAN Interface Card

Module	Description
VWIC-1MFT-T1[1]	One-port T1/Fractional T1 Multiflex Trunk with CSU/DSU
VWIC-2MFT-T1[1]	Dual-port T1/Fractional T1 Multiflex Trunk with CSU/DSU
VWIC-2MFT-T1-DI[1]	Dual-port T1/Fractional T1 Multiflex Trunk with CSU/DSU and Drop & Insert
VWIC-1MFT-E1[1]	One-port E1/Fractional E1 Multiflex Trunk with CSU/DSU
VWIC-2MFT-E1[1]	Dual-port E1/Fractional E1 Multiflex Trunk with CSU/DSU
VWIC-2MFT-E1-DI[1]	Dual-port E1/Fractional E1 Multiflex Trunk with CSU/DSU and Drop & Insert

1. Supported on the Cisco IOS version 12.0(5)XK or later. IOS version 12.07T required to support both the Multiflex Voice/WAN interface card and the ATM IMA network modules in the same Cisco 2600 chassis.

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Alarm Interface Controller Network Module

The Alarm Interface Controller (AIC) is a network module that greatly expands the network monitoring and control capabilities of the Cisco 2600 and 3600 Series routers. The AIC functions as an integrated entity residing within the Cisco 2600 Router to provide network alarm monitoring and remote control of network elements. The AIC reduces service provider and enterprise operating expenses by facilitating a "single box" solution, doing away with the need for a dedicated external alarm monitoring device. This greatly simplifies network layout, monitoring, and control resulting in lower operations, administration, maintenance, and provisioning (OAM&P) costs. The AIC is supported in Cisco IOS® 12.2(2)XG and 12.2(8)T. The AIC network module supports 64 discrete alarm monitoring points, of which 8 of the last 64 alarm points are software- configurable to accept either analog or discrete inputs. The AIC further supports 16 control relays to facilitate the remote control of network elements.

Table 6 Alarm Interface Controller Network Module

Module	Description	Cisco IOS Version
NM-AIC-64	Alarm monitoring and control network module; 64 monitoring points and 16 control points	12.2(2)XG and 12.2(8)T

Advanced Integration Module Options

The Cisco 2600 Series offers data compression or data encryption through the use of an internal AIM slot. This offers the advantage of allowing external slots to remain available for components such as integrated CSU/DSUs, analog modems, or Voice/Fax Network Modules, while offering greater performance for services, applications and bandwidth management.

The Data Compression AIM provides a cost-effective option for reducing recurring WAN costs and maximizes the benefit of the advanced bandwidth management features of the Cisco IOS software. With compression ratios of up to 4:1, the Data Compression AIM supports 8Mbps of compressed data throughput without imposing additional traffic latency—enough to keep two T1 or E1 circuits full of compressed data in both directions simultaneously. The Data Compression AIM supports industry standard LZS and Microsoft Point-to-Point Compression (MPPC) algorithms and ensures compatibility with all Cisco products supporting hardware- or software-based compression.

The Data Encryption AIM offloads encryption processing from the Cisco 2600 Series CPU, providing 10 times the performance over software-only encryption. The AIM-VPN/BP supports a maximum number of 300 remote access tunnels, while the new AIM-VPN/EP provides support for a maximum number of 800 remote access tunnels. The AIM-VPN/EP is designed to take advantage of the performance power of the Cisco 265x Series and is recommended with this series only.

The new AIM-ATM module provides a high-performance hardware-based ATM access solution for one to four T1 orE1 connections supported by the T1 or E1 VWICs (for example, VWIC-IMFT-T1). This frees the network moduleslot to support other functions. When used in combination with a high density voice network module (NM-HDV-xxx), the ATM AIM supports ATM adaption Layer (AAL) 2 and AAL5 VoATM.

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Table 7 Table 6 Advanced Integration Module for the Cisco 2600 Series

AIM-COMPR2	Data Compression AIM for the Cisco 2600 Series (requires IOS software release 12.0(2)T or later)
AIM-VPN/BP	Data Encryption AIM for the Cisco 2600 Series (requires IOS software release 12.1(3)XI or later)
AIM-VPN/EP[1]	DES/3DES VPN Encryption Module for the Cisco 2600—Enhanced Performance (requires IOS software release 12.2(2)T or later
AIM-ATM	High Performance ATM-AIM (requires Cisco IOS software release 12.2(2)XA, 12.2(4)T, or later

1. Recommended with the Cisco 265x only.

Cisco Service and Support

Leading-edge technology deserves leading-edge support. Service and support for the Cisco 2600 Series is available on a one-time or annual contract basis. Support options range from help desk assistance to proactive, onsite consultation.

All support contracts include:

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